Internal Use	
DRPT Tracking #	



# Rail Enhancement Fund Project Application Form

Date: January 30, 2009 Amended: February 1, 2010

#### For Berryville, Elkton, and Roanoke Projects

#### **Purpose of This Amendment**

This Amendment to the REF Application (originally submitted on January 30, 2009 and subsequently amended on February 9, 2009) is to request funding for projects needed to accommodate the first Crescent Corridor trains on the Shenandoah Line – two pairs each way daily, expected to begin operating by late-2011/early-2012. Specifically,

- NS requests deferring two passing track extensions at Bentonville and Stanley (funding requested in February 9, 2009 Amendment). These projects are not critical to operating the first Crescent Corridor trains, but will be needed for implementation of full Crescent Corridor service (~2017+).
- NS requests amending this Application to permit funding of the Roanoke Terminal project (rebuilding main line tracks and crossovers in Roanoke Terminal, which will increase speed and capacity in a critical location) with funds previously intended for the Bentonville and Stanley projects.
- NS acknowledges that the Roanoke Terminal project design will facilitate adding capacity for future passenger service to Roanoke.

#### A. Name of Applicant (Name and Address)

Norfolk Southern Railway Company Three Commercial Place Norfolk, VA 23510

Applicant type:	43
Passenger Railroad	
X Freight Railroad	
Locality	
Business	
Other_	

#### B. Contact Information:

Responsible Person/Title: Bill Schafer, Director Strategic Planning

Telephone: 757-629-2894 Fax: 757-533-4884 Email: bill.schafer@nscorp.com

Project Manager/Title: Bill Schafer, Director Strategic Planning

Telephone: 757-629-2894 Fax: 757-533-4884 Email: bill.schafer@nscorp.com

C. Project Title: Crescent Corridor Initiatives

D. Project Location: (City/County, Rail line, Railroad Mile Post, attach map)

See Appendix 1 – Spread Sheet of Two of the Crescent Corridor Projects Described in 2/4/09 Framework Agreement and Additional Project at Roanoke

#### See Appendix 2 - Details of each project

- E. Owner of Property/Right-of-Way/Facility/Personal Property:

  Norfolk Southern Railway Company owns the mainline track rights-of-way, tunnels, bridges, and related appurtenances. NS or an affiliate will acquire any property required.
- F. Responsible Party for Continuous Maintenance of Project:

  Norfolk Southern Railway Company. This Application is for capital costs only.

  NS will assume all ongoing maintenance and operating cost responsibilities and future capital costs.
- G. Project Information:
  - 1) Description of Project:
  - 2) Project Objectives:

#### **Overview of Norfolk Southern's Crescent Corridor Project**

In 2007, Norfolk Southern (NS) announced the Crescent Corridor Project, an ambitious endeavor to develop premium rail intermodal service between the Northeast, the Southeast and the Southwest to attract domestic freight from paralleling interstate highways. While intermodal trains operate in this corridor today, they are few and their effect on the level of through truck traffic is minimal.

Following the success of the public-private funding that implemented the Heartland Corridor, NS conceived of the Crescent Corridor as another public-private partnership with significant potential to alleviate truck congestion on major interstate highways. The greatest benefit would be realized on Interstate 81, which runs the length of the Commonwealth of Virginia and which is the Nation's principal truck artery between the Northeast and the South.

NS estimates that the Crescent Corridor, when fully implemented, will cost between \$2 and 3 billion, and will divert over 1 million trucks per year. Most of these trucks would

have traveled on Virginia highways for part of their journeys. NS must find public partners to make full Crescent Corridor service a reality – NS does not have the wherewithal to make the necessary improvements on its own in a meaningful time frame – and is grateful for Virginia's interest and support to date.

NS is also partnering with five states, of which Virginia is one, to apply for significant funding of Crescent Corridor projects in the form of a TIGER grant (Transportation Investment Generating Economic Recovery).

#### Overview of NS Routes in Virginia Needed for Crescent Corridor

NS realizes that the Crescent Corridor's enormous freight market has many originating and terminating points. Most of this freight is channeled through Virginia on I-81 and the additional intermodal trains NS proposes to operate as part of the Crescent Corridor will likewise be channeled through Virginia. Some of NS's routes can support additional trains with relatively little additional infrastructure. Other routes need significant upgrading before the potential of the Crescent Corridor can be realized.

Virginia and NS have already partnered to relieve the worst choke points on the Crescent Corridor with implementation of track and signal improvements between Manassas and Front Royal as described in NS's Project Application dated June 13, 2007 (and amended on August 24 and September 24). As a result of these improvements, NS will be able to expand the number of intermodal trains between the Northeast and most Southeastern/Southwestern markets. These trains also will be able to operate on improved schedules and with more reliability than at present, and are expected to attract about 600,000 trucks to Crescent Corridor trains over a fifteen year period. While the volume of trucks may appear small compared to the millions of trucks the Crescent Corridor project is designed to divert, without the Manassas-Front Royal projects, the Crescent Corridor would not get off the ground. Many more Virginia projects must be completed before the Crescent Corridor can reach its potential, and this Application describes three of the most important.

Below is a map showing the NS routes that are part of the Crescent Corridor in Virginia:



Crescent Corridor trains will operate over the green lines shown on the map. The majority will utilize the Piedmont Route between Birmingham-Atlanta-Charlotte and the Northeast via Danville-Lynchburg-Manassas. About a third of the trains will utilize the Shenandoah Route between Northeast and Tennessee markets via Riverton (Front Royal)-Roanoke-Bristol.

#### Piedmont/Shenandoah Route – WV State Line-Front Royal (H-Line)

NS's line between Front Royal and the West Virginia panhandle (H-Line) is now the most critical choke point on the Crescent Corridor network. This line is single track with signaling and small (i.e. about a mile in length) passing tracks. All Crescent Corridor trains to and from the Northeast (20+ per day when fully implemented) will travel over this segment. The most important near-term upgrading needed: extending the passing track at Berryville (included in last year's Application for FY2009 as well as this FY2010-2011 Application). The construction of a five-mile double track segment in the vicinity of the Virginia Inland Port has been completed (part of the June 13, 2007 Application for release of funds provided by the Virginia legislature; construction began on May 27, 2008 and the finished project was opened for traffic on March 31, 2009). Longer term, at least one additional portion of double track will be needed between Riverton and the West Virginia state line.

#### Piedmont Route - Riverton-Manassas (B-Line)

As a result of funding provided by the Virginia legislature, Norfolk Southern continues to upgrade capacity on the B-line. (Most of the capacity projects are described in the Application dated June 13, 2007.) In calendar year 2008, Norfolk Southern completed rehabilitation and extension of two passing tracks: Whitecut (Woods/Cody) and Allison. In addition, the entire line between Manassas and Riverton received signals and traffic control. Work continued into calendar year 2009: construction began on the new 11,000-foot passing track between Wellington (mp B5.8) and Gainesville (mp B8.0) in first quarter 2009, and completion is expected in first quarter 2010. Once Wellington-Gainesville is in service, NS expects capacity to be sufficient on the B-line to accommodate Crescent Corridor trains through FY2015.

#### Piedmont Route - Manassas-Danville (SR Main)

Fortunately, capacity on NS's main line between Manassas and the NC state line south of Danville is not as constrained as on the H-line. The principal improvement needed in the next few years is restoration of 7.2 miles of second main line track to connect two double track segments between Nokesville and Calverton, creating 22.3 miles of contiguous double track on Norfolk Southern's main line between Manassas and Remington, VA. Addition of this capacity will allow trains operating in both directions to pass with little or no delay. This project is the subject of a separate Application, and funding is authorized by REF Agreement number 76510-01, which was executed on September 30, 2009.

#### Shenandoah Route - Riverton (Front Royal)-Roanoke (H-Line)

In the 180 miles between Riverton and Roanoke, there are plenty of passing tracks — eighteen — but only one place where an 8000-foot train (proposed Crescent Corridor train length) can pass another 8000-foot train without blocking grade crossings. The principal improvements needed are to passing tracks. In this Application, NS proposes to construct one new passing track on this line segment in FY2010-2011. Crescent Corridor trains with the most time-critical schedules will operate via the Shenandoah Route, and reduced running times — possible with more and better locations for trains to meet — are essential.

#### **Roanoke Terminal**

Roanoke Terminal is a major point of activity on Norfolk Southern. It is the site of NS's Virginia Division headquarters, a major locomotive maintenance facility and a major freight classification yard at Shaffers Crossing, and the confluence of three major main lines: Norfolk-Bluefield/Bristol, Roanoke-Hagerstown, and Roanoke-Winston Salem.

East of Shaffers Crossing yard, in downtown Roanoke, three to four main line tracks guide trains to one of these three main routes between mp N257 and N258. Crossovers allow trains to pass from one track to another, on the authority of signal indications. Nearly all trains utilize at least one crossover, and the top speed permitted through each crossover is fifteen miles per hour. All Crescent Corridor trains that will operate on the Shenandoah Route must pass through the Roanoke Terminal, as must all Heartland Corridor trains and many Coal Corridor trains.

To enable Crescent trains to attain truck-competitive running times, NS is undertaking dozens of projects to raise maximum authorized train speeds between Harrisburg and Memphis. An example of one such project is the reconstruction of Riverton Junction (near Front Royal), currently underway, which is benefiting from Virginia funding, and which will increase train speeds from 10-15 mph to 25-30 mph when completed.

Norfolk Southern proposes to upgrade the signals and turnouts between mp N257 and N258, which will allow 30 mph operation through turnouts, effectively doubling the speed of many trains. The time saved by this speed increase will help close the gap between the truck-competitive schedules needed for the Crescent Corridor to succeed and the schedules possible at the present time.

Further, the improvements contemplated in the Roanoke Terminal will facilitate addition of tracks and turnouts needed to accommodate future passenger service to Roanoke, if and when it develops.

#### Shenandoah Route - Roanoke-Bristol (N- and NB Lines)

The Crescent Corridor shares the line segment between Roanoke and Walton (N-Line) with the Coal and Heartland Corridors. In general, Roanoke-Walton has sufficient capacity for all three Corridors with minor exceptions – the Montgomery Tunnel bore, through which main line track #1 passes, will need enlarging to accommodate double stack trains (mp N285) and second main track should be restored between Walton and Bluff (N297.3-N305.0) at some point in the future to serve as a "queuing lane" to stage Heartland and Coal Corridor trains when conflicts with Crescent Corridor trains at Walton arise.

The Walton-Bristol (NB-) Line shares characteristics with the H-Line between Riverton-Roanoke: short passing tracks and slow speeds. NB-Line projects are not specifically listed in the 2/4/09 Framework Agreement and will be the subject of a separate Application.

3) Relationship to Other Projects under Development by Applicant or Previously Funded by this Program:

See descriptions of FY2010-2011 Projects in Appendix 2

4) Describe the Public Benefits of Project. Identify significant types of benefits and beneficiaries from this project. (See Attachment A).

See descriptions of FY2010-2011 Projects in Appendix 2

5) Attachment A – Project Data Information Form – Must be completed by Applicant and submitted with this Application.

See Attachment A

н. туре	ot Project:
1)	X New Construction X Rehabilitation Study
2)	X Rail Infrastructure Rail Facility/Station Equipment/Rolling Stock X Signals/Communication Equipment
3)	Other
See desc	criptions of FY2010-2011 Projects in Appendix 2
I. Applica	tion Scope of Work Covers:
XI	Entire Project A Phase of a Multi-Phase Project Completion Phase

#### See descriptions of FY2010-2011 Projects in Appendix 2

J. Project Budget Summary:

Preliminary Service, Engineering, Or Feasibility Study Environmental Evaluation Design Engineering Right of Way Acquisition Construction Construction Management Lease/Acquisition of Equipment Public Involvement (if applicable) Other	\$	
Subtotal Project Budget	\$	
Total Project Budget	\$ <u> </u>	

#### See descriptions of FY2010-2011 Projects in Appendix 2

K. Attach detailed budget and schedule information. If the project is for final design, construction or procurement; then plans, specifications and reports to a preliminary engineering level (approximately 30%) should be provided to support the project cost and major features (if applicable). A sample budget and schedule is included in Appendix D.

#### n/a

- L. Rail Enhancement Funds Requested in this Application: <u>\$ 23,723,000</u> Maximum 70% of Total Project Budget. Do not include any previous Allocations or future phases.
- M. Local Match Required by Applicant: \$10,729,000
  At least a minimum 30% of Total Project Budget

If Overmatch, Provide Percentage

NS will match 31% of estimated project costs, a 1% overmatch

- 1) Match breakdown by Source (Including any in-kind match)
  - a. Provider of Local Match Norfolk Southern Railway Company
  - b. Status (confirmed/anticipated) Confirmed
  - c. Attach justification for value of in-kind match.
- 2) Other Funding Sources Beyond Match Requirement
  - a. Provider of Overmatch: n/a

#### b. Status (confirmed/anticipated) n/a

N. Project implementation schedule (based in months). List major milestones of the project, including environmental review and public involvement points if applicable.

#### See descriptions of FY2010-2011 Projects in Appendix 2

O. Statement of how this project promotes or does not preclude dual/multi-access use.

#### See descriptions of FY2010-2011 Projects in Appendix 2

P. List additional users of rail line, facility, and/or equipment:

#### See descriptions of FY2010-2011 Projects in Appendix 2

Q. Identify any possible environmental or other issues/concerns within the scope of this project.

#### See descriptions of FY2010-2011 Projects in Appendix 2

#### Required Attachments:

Application is not complete without items 1-5 completed by the Applicant and submitted with the Application.

- 1. Attachment A Project Data Information Form (provided)
- 2. Attachment B Application Checklist (provided)
- 3. Detailed cost, budget and schedule. Include preliminary engineering to 30% report, if applicable (sample in Appendix D).
- 4. Certification of Match/% of Match/Documentation of Source of Match including Defined Match Source (to be provided by Applicant).
- 5. Certification of Additive Investment (To be provided by Applicant).
- 6. Statement from the Applicant/Owner of the facility that the SWAM participation goals will be achieved by the project.
- 7. Statement by the owner of the facility that acknowledges the Commonwealth will have a public interest in the facilities, materials, equipment and improvements funded or impacted by this project (to be provided by Applicant/Owner).

#### **Application and Attachment Certification**

To the best of my knowledge all information contained in this Application and its attachments is true. The information provided to the Virginia Department of Rail and Public Transportation (DRPT) is subject to full disclosure except where protected by Virginia Code. Any additional documentation related to this Application will be provided to DRPT upon request.

Authorized Signature and Title:

Date: <u>January 31, 2010</u>

George William Schafer, III Director – Strategic Planning

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#### Rail Enhancement Fund Project Application Form

# Attachment A Project Data Information Form

Date: January 30, 2009 Amended: February 1, 2010

Name of Applicant and Project: Norfolk Southern Railway Company – Crescent Corridor Initiatives at Berryville, Elkton, and Roanoke

General Instructions: Please complete the following forms that apply to the project application.

- For Freight Service projects, complete forms A1, A2 and A5
- For Intercity/Amtrak passenger projects, complete forms A1, A3 and A5
- For Commuter/VRE passenger projects, complete forms A1, A4 and A5
- For projects that involve benefits to both freight and passenger projects, form A1 and forms A2-A4 that apply must be completed. For each completed form A2-A4, a form A5 must be completed for each category for projects resulting in multiple project benefits.

#### Terms:

Project Cost and Construction period: Form A1 shall be completed with total project cost by year of expenditure with total DRPT cost identified by year of expenditure. This section must be completed for all project applications.

Demand Characteristics: This category of information relates to the additional demand for rail service (including freight and passenger) due to the project. This additional demand must be over and above baseline conditions that currently exist. The specific data to enter here defines initial demand, steady state demand, and the years until steady state demand is achieved.

Steady State Demand: This term refers to the point at which the project benefits/demand have reached a long-term, sustainable level.

Project Impact on Travel Distance: This category of information includes the distance that would be traveled by vehicle or train. All distances should be limited to miles within Virginia. The distance should relate directly to the project-impacted area.

Demand Characteristics for a 15-year Performance Period: This term refers to the project output by performance year, which will be utilized to determine that public benefits and to determine the performance requirements over the 15-year Performance Period of the Grant Agreement.

# Attachment A Form A1 – Project Cost and Construction Period

First Construction Year: Fiscal Year 2010

Last Construction Year: Fiscal Year 2011

Year	Total Project COST	Total DRPT COST
Year 1	\$5,167,800	\$3,558,450
Year 2	\$29,284,200	\$20,164,550
Total	\$34,452,000	\$23,723,000

# Attachment A Form A2 – Freight Service

	CATEGORY	UNITS	VALUE
Guil (from true)  - diversion of to rail (from true)  First year of de 2012  Number of year steady state -	Steady state demand  - diversion of freight to rail (from trucks)	293,726 Intermodal Units/Year - 2008	
	First year of diversion 2012	15,605 IM Units/Year (average over 15 yrs)	
	Number of years until steady state – beyond forecast period	More than 15	

	CATEGORY	UNITS	VALUE
impact on Distance	Rail miles in Virginia (Existing routing before project)	658 Miles	
Project imp Travel Dis	Rail miles in Virginia (routing after project completion)	658 Miles	
T T	Number of years until steady state	Presently at steady state Number of Years	

	CATEGORY	UNITS	VALUE
ions	Railcars per Train	100 Railcars/Trains	
Conversions	Rail tons per Railcar	50 Tons/Railcar	
	Trucks per Railcar	1.7 Trucks/Railcar	

	CATEGORY	UNITS	VALUE
5	Change in Daily Delay for Freight Trains	45 hours for 20 trains Railcars/Trains	
Other	Reduction in Number of Rail At-Grade Crossings	No reduction; just less time occupying some crossings due to higher speeds Tons/Railcar	

# Attachment A Form A3 – Passenger Service – Intercity/Amtrak

#### n/a

	CATEGORY	UNITS	VALUE
istics	Annual Amtrak passengers (existing)	Passengers/Year	
Characteristics	Steady State Demand  – Additional Amtrak Passengers	Passengers/Year	
Demand C	First Year Number of Additional Passengers	Passengers/Year	
۵	Number of Years Until Steady State	Number of Years	

	CATEGORY	UNITS	VALUE
Travel	Amtrak Passenger Trip Length (existing)	Miles	
돈	Amtrak Passenger Trip Length (After Project Completion)	Miles	
Project Impact of Distance &	Amtrak Travel Time Per Trip (existing)	Minutes	
Pro	Amtrak Travel Time Per Trip (After Project Completion)	Minutes	

# Attachment A Form A4 – Passenger Service – Commuter/VRE

#### n/a

	CATEGORY	UNITS	VALUE
ristics	Annual VRE passengers (existing)	Passengers/Year	
Characteristics	Steady State Demand  - Additional VRE Passengers	Passengers/Year	
Demand C	First Year Number of Additional Passengers	Passengers/Year	
۵	Number of Years Until Steady State	Number of Years	

	CATEGORY	UNITS	VALUE
Travel	VRE Passenger Trip Length (existing)	Miles	
, E	VRE Passenger Trip Length (After Project Completion)	Miles	
Project Impact c	VRE Travel Time Per Trip (existing)	Minutes	
Pro	VRE Travel Time Per Trip (After Project Completion)	Minutes	

Attachment A
Form A5– Demand Characteristics for 15-Year Performance Period

Performance Year	Performance Value *
1	4,479
2	5,716
3	8,865
4	10,111
5	11,354
6	12,600
7	13,847
8	15,093
9	16,337
10	17,583
11	18,826
12	22,673
13	24,103
14	25,533
15	26,961
Total	234,081

For Freight Service Projects – car loads or containers per year For Inter-City/Amtrak Passenger Projects – passengers per year For Communter/VRE Passenger Projects – passengers per year

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#### Rail Enhancement Fund Project Application Checklist Attachment B

Date: February 1, 2010 Name of Applicant and Project: Norfolk Southern Railway Company - I-81 Crescent Corridor Initiatives **Checklist for Application:** 1. Project is consistent with goals of applicable adopted state, regional and/or local plans. X YES \_\_\_\_ NO 2. Project is an Additive Investment to Virginia. \_X\_ YES \_\_\_ NO 3. Project provides for, or does not preclude, shared or dual access opportunity. X YES 4. Applicant has provided documentation and certification of at least a minimum 30% match. \_X\_ YES \_\_\_ NO 5. Applicant has provided an environmental review plan and/or public involvement plan, if applicable, and required budget for this activity as outlined in Appendix D. YES \_\_\_ NO 6. Application is complete, including signature and specified number of hard copies and an electronic (pdf file) copy; and Applicant has reviewed the Standard Agreement as provided in Appendix C. X YES \_\_\_ NO

#### Attachment B

#### Measures for Public Benefit/Cost Analysis

- Congestion Relief
- Environmental Improvements
- Reduced Crash and Accident Cost
- Reduction in Cars and Trucks on Highway
- Added Capacity
- Fuel/Pollution Savings
- Carbon Equivalent

#### **Attachment C**

#### **Certification of Match**

Norfolk Southern Railway Company ("Norfolk Southern") has applied to the Commonwealth of Virginia for Rail Enhancement Funds in FY2010-2011 in the amount of \$23,723,000 in connection with three projects designed to increase capacity and to decrease running time on portions of Norfolk Southern's Crescent Corridor in Virginia. As described in greater detail in Norfolk Southern's Application, these projects will:

- Produce passing tracks that will enable longer trains to meet or pass other trains of similar length
- Provide capacity needed to assure reliability of the premium intermodal trains necessary to attract truck traffic from Interstate highways
- Modify trackage in Roanoke Terminal to permit higher train speeds needed for truck-competitive running times

As part of this Application, Norfolk Southern hereby certifies that it will provide a local match equivalent to thirty percent (31%) of the estimated total project cost for which Rail Enhancement Funds are made available, or \$10,729,000. This match will be provided entirely by Norfolk Southern or one or more parents, subsidiaries or affiliates of Norfolk Southern.

NORFOLK SOUTHERN RAILWAY COMPANY By:

John H. Friedmann, Vice President

Date: January 31, 2010

#### **Attachment D**

Ms. Thelma Drake, Director Virginia Department of Rail and Public Transportation 600 East Main Street, Suite 2102 Richmond, VA 23219

Subject: Certification of Additive Investment

Dear Ms. Drake:

This letter certifies that the Virginia Funds requested in the accompanying Application will add to the state's rail infrastructure and will not be used to replace funds that would have otherwise been spent in the Commonwealth.

Norfolk Southern Railway Company's Application requests funds for FY2010-2011 for infrastructure projects on the Crescent Corridor that will:

- Produce passing tracks that will enable longer trains to meet or pass other trains of similar length
- Provide capacity needed to assure reliability of the premium intermodal trains necessary to attract truck traffic from Interstate highways
- Modify trackage in Roanoke Terminal to permit higher train speeds needed for truck-competitive running times

Although Norfolk Southern foresees traffic growth on the Crescent Corridor, internal funds will not be available to undertake all of the needed improvements for some years to come. Without Virginia Funds, these projects will not be built until there are significant changes in traffic flows, which would delay the benefits made possible by the operation of premium intermodal service.

In sum, Norfolk Southern certifies that the Virginia Funds requested in its Application will be used as part of a public-private partnership for improvements that NS would not undertake alone at this time.

Sincerely,

John H. Friedmann Vice President

January 31, 2010

#### Attachment E

#### **Statement of Public Interest**

Name of Applicant and Projects:

#### Norfolk Southern Railway Company

Project Name	Location	Milepost Limits
Berryville Passing Track Extension	Berryville, VA	H37.6-H39.8
Elkton Passing Track Construction	Elkton, VA	H115.5-H118.2
Roanoke Terminal Track Improvements	Roanoke, VA	N257-N258

Statement from the owner of the facilities that acknowledges the Commonwealth will have a Public Interest in Private Facilities impacted by these projects.

To Whom It May Concern:

At the appropriate time, Norfolk Southern will enter into an agreement to be negotiated with the Commonwealth of Virginia to protect the Commonwealth's public interest in the projects listed in the table above.

NORFOLK SOUTHERN RAILWAY COMPANY By:

ohn H. Friedmann, Vice President

January 31, 2010

#### Attachment F

#### **Statement of SWAM Participation**

Name of Applicant and Projects: Norfolk Southern Railway Company

Project Name	Location	Milepost Limits
Berryville Passing Track Extension	Berryville, VA	H37.6-H39.8
Elkton Passing Track Construction	Elkton, VA	H115.5-H118.2
Roanoke Terminal Track Improvements	Roanoke, VA	N257-N258

January 31, 2010

To Whom it May Concern:

In connection with Norfolk Southern Railway Company's Rail Enhancement Fund Application for the projects listed in the table above, please accept this letter as the applicant's statement regarding small, women- and minority-owned business (SWAM) participation goals.

For project work that is not performed by Norfolk Southern's workforce, Norfolk Southern will undertake reasonable and good faith efforts to achieve the SWAM participation goal for the project through race-neutral and gender-neutral means that are lawful and non-discriminatory. We understand the project participation goal to be forty percent (40%) of the total value of contracts between Norfolk Southern and third parties for the performance of the project work. The success of Norfolk Southern's efforts will of course be impacted by the availability of qualified and willing small businesses and women- and minority-owned businesses within the market area of the project.

Thank you for considering Norfolk Southern's Application.

Very Truly Yours,

John H. Friedmann, Vice President

#### **List of Appendices**

#### Appendix 1

Master Spread Sheet showing proposed three Crescent Corridor projects, FY2010-2011

#### Appendix 2

Description of FY2010-2011 Projects

Berryville Passing Track Extension

**Elkton Passing Track Construction** 

Roanoke Terminal Track Improvements

# Berryville-Elkton-Roanoke Terminal Projects

# Crescent Corridor Projects for Virginia FY 2010-2011 - For 2/1/10 Amendment to Rail Enhancement Fund Application

DRPT I-81/Rt 29 Corridor	Description	Total Project Cost	CHANGE TOOL	Oliver of the same		DRPT Share		Factorial								
		,		no ronome	STUDING TEDENAL FUNDING (%) NS Share (%) Share (%)	3	S Share (%)	Share (%)	Phase A	Phase 8	EVOLUTION DEPT Capital	DRPT Capital	DRPT Capital	DRPT Capital Py2013 DRPT Capital	DRPT Capital	DRPT Capital
	Rehabilitate Berryville pessing track					1	1	+				110717	FTZ01Z		P72014	FY2016
Berryville np H37.6-H39.8	and construct extension to create 11,000 passing track	\$ 000 000 a						<u> </u>	Engineering by	Poject Complete						
		Acceptance of	•	000,000		30%	30%	12		by 1/31/2011	# PERO DOWN #	2670,000				
	Construct 11,000' passing track			_		_			Γ			l				
CHUCON THE H 115.5-H 116.2	near Elitton	\$ 12,580,000	\$ 8,606,000	3,774,000	_	100	700	5	Engineering by	Project Complete						
	Modify tractors to parmit higher						5	22	Τ	7 1/31/2011	1,320,900 \$	7,485,100				
Roanoke Terminal mp N257-	thin speeds needed for truck-			_												
N258	competitive running times	\$ 15,672,000	\$ 10.717.000	R 468 000	_	-	-	ន៍	Engineering by	Project Complete				-		
TOTAL Creamen	TOTAL Crossess Consider Best. 44			200,000		468	2	8		y 6/30/2011	3,216,900 \$	18,229,100				
	anafal Lighte	\$ 34,462,000	\$ 23,723,000 \$	10,729,000												
										_	\$ DOM:/9L'0	28,284,200				

#### **Berryville Passing Track Extension**

**Project Location**: Berryville, Clarke County, VA, on Norfolk Southern's Hagerstown-Riverton main line. Project limits: mp H37.6-H39.8

Owner of Property/Right of Way: Norfolk Southern Railway Company

Responsible Party for Continuous Maintenance of Project: Norfolk Southern Railway Company

#### **Project Information:**

#### **Description of Project:**

Berryville is located between Hagerstown, MD and Riverton Junction (Front Royal), VA on Norfolk Southern's main artery between the Southeast (including Virginia) and Northeast. This line is part of the only north-south rail route east of Cincinnati, OH with sufficient clearance to handle "double-stack" container traffic, including much of that moving to/from the port of Norfolk, VA. The route also parallels Interstate 81.

The Hagerstown-Riverton line is a signaled, single track main line. Trains pass or overtake each other at passing tracks. This project would upgrade the existing 5,700-foot passing track at Berryville to accommodate longer trains at higher speeds.

At present, trains using the passing track are limited to 10 mph. Further, the passing track is only 5,700 feet long. 85-90% of the 16-20 trains/day operating between Hagerstown and Riverton are too long to fit into the passing track. NS proposes to replace 10% of the crossties in, and to surface, the existing passing track; to replace existing #12 turnouts with #20 turnouts; and to construct 5,300 feet of new track to enlarge the passing track to a total length of 11,000 feet. After completion, any train operating between Hagerstown and Riverton will be able to meet or pass any other train at Berryville, and trains using the passing track will be able to operate over it at 25 mph or more.

#### **Project Objective:**

The overall objective of the project is to increase capacity and to speed up train operations on the Hagerstown-Riverton main line. This artery today handles all NS's freight between the Northeast and the Southeast, as well as important container traffic between the Virginia Inland Port and the Port of Hampton Roads. In the future, this artery will also handle all Crescent Corridor intermodal trains to/from the Northeast.

The specific objective is to upgrade and extend the passing track at Berryville. NS trains incur an aggregate delay of 12 hours daily because of the inability to utilize fully the

passing track at Berryville. Once the passing track is improved, aggregate delay will be twelve hours less than it is today.

# Relationship to other projects under development by applicant or previously funded by this program:

This project complements FY2008 projects on B- and H-lines. NS has already completed the upgrading of the Marsh Run-Ashby passing track to main line standards and the construction of about 3.8 miles of new second main line to create a five mile segment of double track between mp H51.9 – H56.9 in the vicinity of the Virginia Inland Port (see NS's application of 6/13/07 for more detail). By upgrading and extending the Berryville passing track in FY2010-2011, NS will add a second location on NS's Riverton-Hagerstown main line (59 miles) where two contemporary intermodal trains – Crescent Corridor or otherwise – will be able to meet or pass.

#### Describe the Public Benefit of Project:

Overall public benefits:

- By reducing aggregate delay, by improving running time, and by making freight rail more attractive to potential rail users, this project will help to improve air quality, conserve fuel (because of rail's efficiency advantage) and reduce truck traffic
- By increasing capacity, the project enables the rail mode to absorb more growth

#### **Type of Project:**

Project is rehabilitation (existing passing track) and new construction (passing track extension) of rail infrastructure. Includes modification to signal and communication equipment (signal upgrading and relocation, and relocation of fiber optic cable).

#### Application Scope of Work Covers: Entire project

#### **Project Budget Summary:**

Design Engineering	\$ 313,294
Right-of-way Acquisition	\$ 300,000
Construction	\$4,284,074
Construction Management	\$ 226,669
Lease/Acquisition of Equipment	\$
Other (Relocate fiber optic cable)	\$ 875,963
Total Project Budget	\$6,000,000

Rail Enhancement Funds Requested in this Application: \$4,200,000 (70%)	
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This request is for capital costs only. NS will assume all ongoing maintenance and operating cost responsibilities and future capital costs.

No provision has been made for crossing closure or grade separation. If Norfolk Southern can successfully negotiate crossing closures as part of the project, the overall project cost may increase but such increase would be funded by Norfolk Southern, thereby increasing NS match to greater than 30%.

Local M	Satch Required by Applicant: \$ 1,800,000 (30%)
If Over	match, Provide Percentage: 0%
1	l) Match Breakdown by Source (include in-kind)
	a. Provider of Local Match Norfolk Southern Railway
	b. Status (confirmed/anticipated) Confirmed
2	) Other Funding Sources Beyond Match Requirement
	a. Provider of Over Match n/a
	b. Status (confirmed/anticipated) n/a

# M. Project implementation schedule (based in months). List major milestones of the project.

Survey and Develop Plans:	3 Months
Acquire Right of Way:	3 Months
Bidding:	2 Months
Permitting:	2 Months
Relocation of Fiber Optic Line	1 Month
Grading:	4 Months
Track work:	3 Months
Total:	18 Month

#### Statement on how this Project promotes or does not preclude Dual/Multi-Access Use:

This project is on Norfolk Southern owned right-of-way on which only Norfolk Southern operates; the rail line will remain an exclusive Norfolk Southern route. There is no proposal to change current operations to allow dual access by another railroad on this track. (The competing north-south route of CSX Transportation, Inc. extends between Alexandria, VA and Rocky Mount, NC, via Richmond, VA.)

Also, Project anticipates intermodal freight growth and will enable service enhancements that will attract domestic truck traffic from many trucking companies. In this sense, Project promotes multi-access (i.e., by trucking companies) use.

List additional users of rail line, facility, and/or equipment: trucking companies using intermodal service offered by Norfolk Southern.

# Identify any possible Environmental or other issues/concerns within the scope of this project.

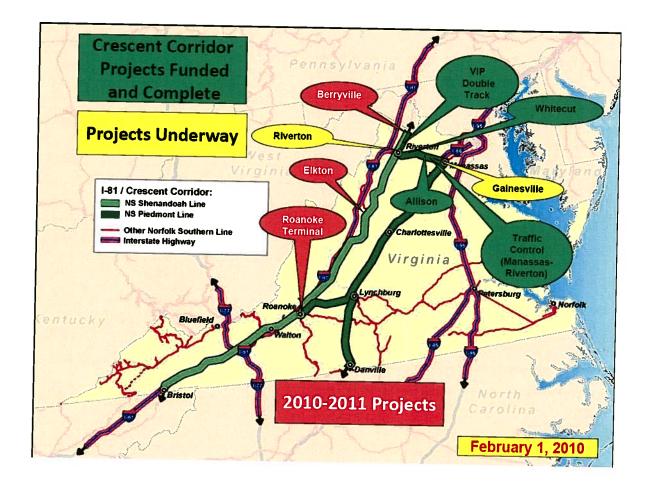
Overall environmental effects are expected to be beneficial as rail freight is considerably more fuel efficient and less polluting than truck freight.

There are no known environmental issues or concerns at this time; there do not appear to be any open space easements adjacent to NS right-of-way in the project limits.

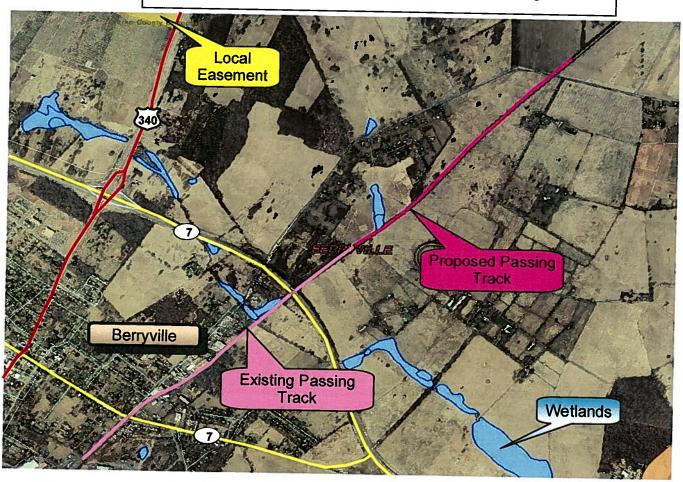
#### Added Capacity to Rail Corridor (Additional Railcars or Passengers)

When viewed in isolation, the expanded passing track at Berryville will reduce 12 hours aggregate train delay, which will allow faster turn times for assets such as locomotives, crews and freight cars. When combined with other planned or proposed projects the synergies will enable additional train starts, increased throughput, and improved running times on this north-south corridor.

#### **Project Map**



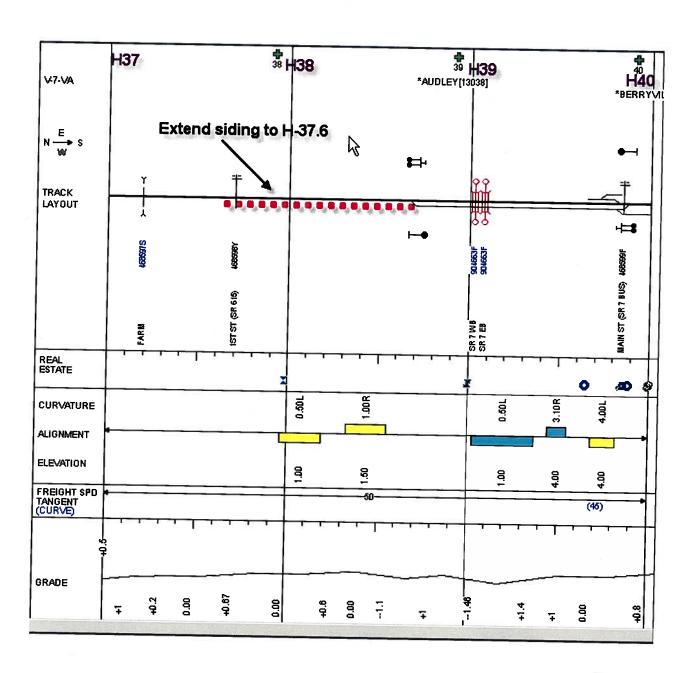
# Berryville Passing Track Extension mp H37.6 – H39.8 Clarke County





Statewide Rail Plan

#### Diagram of Proposed Passing Track Extension Berryville, VA



#### **Elkton Passing Track Construction**

**Project Location**: Elkton, Rockingham County, VA, on Norfolk Southern's Riverton-Roanoke main line. Project limits: mp H115.5 – H118.2

Owner of Property/Right of Way: Norfolk Southern Railway Company

Responsible Party for Continuous Maintenance of Project: Norfolk Southern Railway Company

#### **Project Information:**

#### **Description of Project:**

Elkton is located between Riverton and Roanoke, VA on Norfolk Southern's main artery between the Northeast and Tennessee. This line is a secondary main line today but will become a major component of the Crescent Corridor for premium intermodal traffic between the Northeast and two major Tennessee markets. This route is cleared for double stack container traffic and parallels Interstate 81.

The Riverton-Roanoke route is a single track main line, governed by signaled traffic control, with short (less than 8000') passing tracks about every ten miles. Trains pass or overtake each other at passing tracks. This project would construct a new 11,000-foot passing track just south of Elkton to accommodate longer trains at higher speeds.

Longer passing tracks are badly needed between Shenandoah and Roanoke, about 130 miles. In that distance, there is only one place where long trains can meet or pass: between Vesuvius and Pkin, about three miles of double track on the ruling northbound grade, about 65 miles north of Roanoke and 60 miles south of Shenandoah, and which is encumbered with eight grade crossings throughout its length.

NS proposes to construct a new passing track 11,000 feet long, with #20 turnouts at either end. After completion, any train operating between Roanoke and Riverton will be able to meet or pass any other train at Elkton, and trains using the passing track will be able to operate over it at 25 mph or more.

#### **Project Objective:**

The overall objective of the project is to increase capacity and to speed up train operations on the Riverton-Roanoke main line. This artery today handles merchandise, coal and grain, and will be an important component of the Crescent Corridor for premium intermodal traffic between the Northeast and the major truck markets in Tennessee.

The specific objective is to establish a point where trains can pass each other in the vicinity of Elkton.

# Relationship to other projects under development by applicant or previously funded by this program:

This project complements FY2008 projects on the H-line at Front Royal. NS completed upgrading the Marsh Run-Ashby passing track to main line standards and the construction of about 3.5 miles of new second main line to create a five mile segment of double track between mp H51.9 – H56.9 in the vicinity of the Virginia Inland Port (see NS's application of 6/13/07 for more detail). By constructing a new passing track near Elkton in FY2010-2011, as well as the proposed passing track extension at Berryville, NS will create two more locations between Roanoke and Hagerstown (240 miles) where two contemporary intermodal trains – Crescent Corridor or otherwise – will be able to meet or pass.

#### **Describe the Public Benefit of Project:**

#### Overall public benefits:

- This project, with the other passing track projects mentioned above, will make possible Crescent Corridor premium intermodal service. At present, very few locations exist where two 8000' trains can pass each other between Hagerstown and Roanoke. The standard length of a Crescent Corridor intermodal train will be 8000'.
- By reducing aggregate delay, by improving running time, and by making freight rail more attractive to potential rail users, this project will help to improve air quality, conserve fuel (because of rail's efficiency advantage) and reduce truck traffic
- By increasing capacity, the project enables the rail mode to absorb more growth

#### Type of Project:

Project is new construction of rail infrastructure. Includes signal and communication equipment (signal upgrading and relocation, and relocation of fiber optic cable).

Application Scope of Work Covers: Entire project

#### Appendix 2 – Details of FY2010-2011 Projects Norfolk Southern Rail Enhancement Fund Application January 30, 2009

Amended	Fehrnary	1 2010
	T COL HALL	TA WULU

Project Budget Summary (2008 dollars):	Amended rebruary 1, 20	
Preliminary Service, Engineering, or Feasibility Study Environmental Evaluation	\$ 289,340 \$ 314,500	
Design Engineering	\$ 603,840	

Right-of-way Acquisition \$

Construction \$9,523,060

Construction Management \$893,180

Lease/Acquisition of Equipment

Other (Relocate fiber optic cable)

\$ 956,080

Total Project Budget \$12,580,000

#### Rail Enhancement Funds Requested in this Application: \$8,806,000 (70%)

This request is for capital costs only. NS will assume all ongoing maintenance and operating cost responsibilities and future capital costs.

No provision has been made for crossing closure or grade separation. If Norfolk Southern can successfully negotiate crossing closures as part of the project, the overall project cost may increase but such increase would be funded by Norfolk Southern, thereby increasing NS match to greater than 30%.

Note that these estimates are in 2008 dollars. Revised estimates may be necessary when project begins.

#### Appendix 2 – Details of FY2010-2011 Projects Norfolk Southern Rail Enhancement Fund Application January 30, 2009

**Amended February 1, 2010** 

# M. Project implementation schedule (based in months). List major milestones of the project.

Survey and Develop Plans: 3 Months Acquire Right of Way: 3 Months Bidding: 2 Months Permitting: 2 Months Relocation of Fiber Optic Line 1 Month Grading: 4 Months Track work: 3 Months Total: 18 Months

# Statement on how this Project promotes or does not preclude Dual/Multi-Access Use:

This project is on Norfolk Southern owned right-of-way on which only Norfolk Southern operates; the rail line will remain an exclusive Norfolk Southern route. There is no proposal to change current operations and allow dual access by another railroad on this track. (The competing north-south route of CSX Transportation, Inc. extends between Alexandria, VA and Rocky Mount, NC [via Richmond, VA].)

Also, Project anticipates intermodal freight growth and will enable service enhancements that will attract domestic truck traffic from many trucking companies. In this sense, Project promotes multi-access (i.e., by trucking companies) use.

List additional users of rail line, facility, and/or equipment: trucking companies using intermodal service offered by Norfolk Southern.

# Identify any possible Environmental or other issues/concerns within the scope of this project.

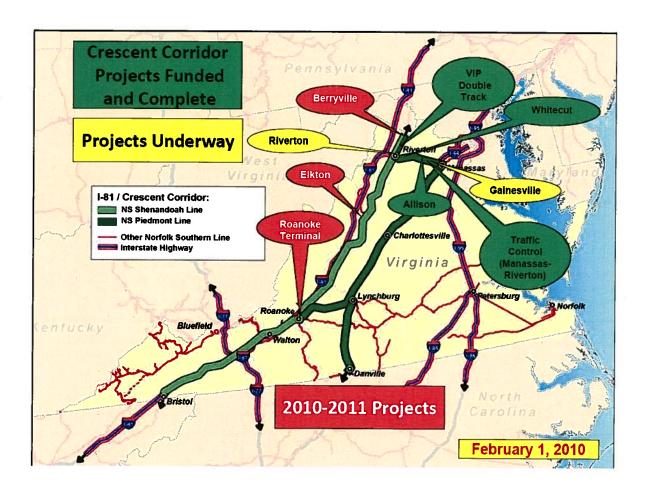
Overall environmental effects are expected to be beneficial as rail freight is considerably more fuel efficient and less polluting than truck freight.

There may be a small quantity of wetlands affected by the passing track construction.

#### Added Capacity to Rail Corridor (Additional Railcars or Passengers)

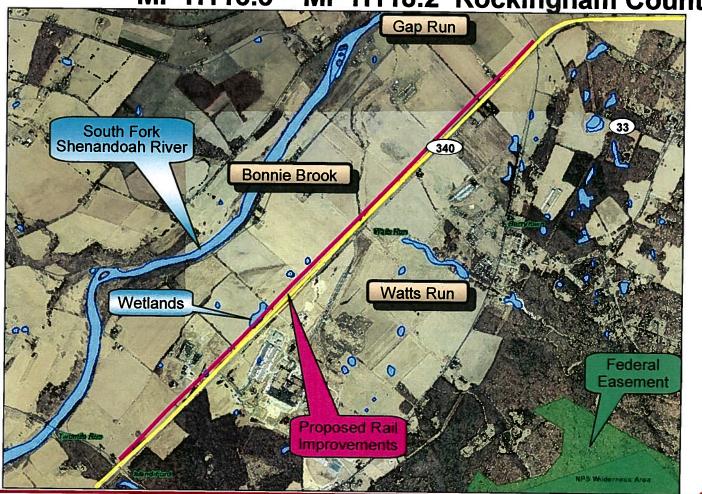
When viewed in combination with the other passing track projects proposed between Hagerstown and Roanoke, as well as the five miles of double track north of Front Royal, the aggregate train delay is reduced by approximately 30 hours per day. Reducing this delay will allow faster turn times for assets such as locomotives, crews and freight cars. When combined with other planned or proposed projects, the synergies will enable additional train starts and increased throughput on this north-south corridor.

#### **Project Map**



#### Elkton. Virginia

MP H115.5 - MP H118.2 Rockingham County

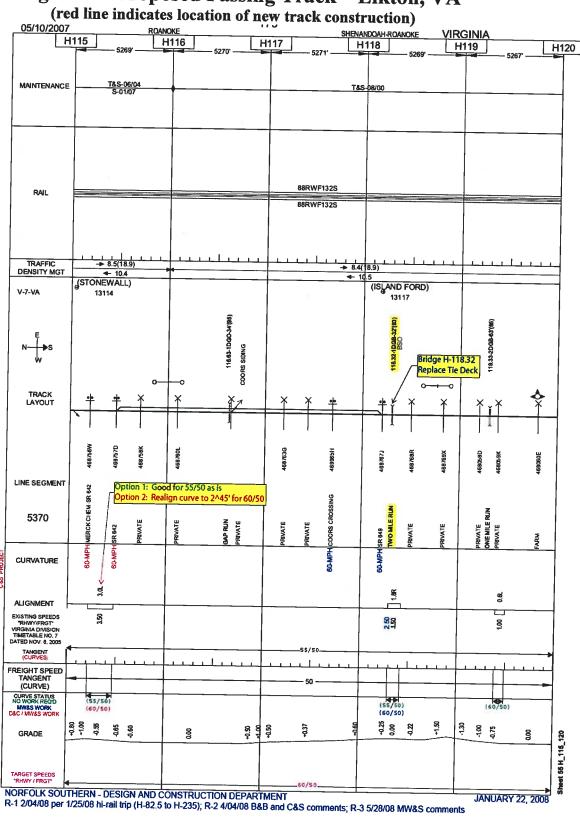


Statewide Rail Plan

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Amended February 1, 2010

### Diagram of Proposed Passing Track - Elkton, VA



#### **Roanoke Terminal Track Improvements**

**Project Location**: Roanoke (City of Roanoke), VA, on Norfolk Southern's Norfolk-Bluefield/Hagerstown-Bristol main line. Project limits: mp N257-N258

Owner of Property/Right of Way: Norfolk Southern Railway Company

Responsible Party for Continuous Maintenance of Project: Norfolk Southern Railway Company

#### **Project Information:**

#### **Description of Project:**

Roanoke Terminal is a major point of activity on Norfolk Southern. It is the site of NS's Virginia Division headquarters, a major locomotive maintenance facility and a major freight classification yard at Shaffers Crossing, and the confluence of three major main lines: Norfolk-Bluefield/Bristol, Roanoke-Hagerstown, and Roanoke-Winston Salem.

East of Shaffers Crossing yard, in downtown Roanoke, three to four main line tracks guide trains to one of these three main routes between mp N257 and N258. Crossovers allow trains to pass from one track to another, on the authority of signal indications. Nearly all trains utilize at least one crossover, and the top speed permitted through each crossover is fifteen miles per hour. All Crescent Corridor trains that will operate on the Shenandoah Route must pass through the Roanoke Terminal, as must all Heartland Corridor trains and many Coal Corridor trains.

To enable Crescent trains to attain truck-competitive running times, NS is undertaking dozens of projects to raise maximum authorized train speeds between Harrisburg and Memphis. An example of one such project is the reconstruction of Riverton Junction (near Front Royal), currently underway, which is benefiting from Virginia funding, and which will increase train speeds from 10-15 mph to 25-30 mph when completed.

Norfolk Southern proposes to upgrade the signals and turnouts between mp N257 and N258, which will allow 30 mph operation through turnouts, effectively doubling the speed of many trains. The time saved by this speed increase will help close the gap between the truck-competitive schedules needed for the Crescent Corridor to succeed and the schedules possible at the present time.

Further, the improvements contemplated in the Roanoke Terminal will facilitate addition of tracks and turnouts needed to accommodate future passenger service to Roanoke, if and when it develops.

#### **Project Objective:**

The overall objective of the project is to increase capacity by improving train running times through the Roanoke Terminal. Roanoke is on the Crescent Corridor route between Harrisburg-Memphis and the Heartland Corridor between Norfolk-Columbus.

The specific objective is to upgrade the three to four main line tracks between mp N257-N258 with respaced and higher-speed crossovers and with improved signaling. Most NS trains incur delays operating through Roanoke because of the low speed (15 mph) of the turnouts in the crossovers. Once improvements are made, trains will be able to operate through the crossovers at up to 30 mph.

# Relationship to other projects under development by applicant or previously funded by this program:

The Roanoke project is synergistic with all Crescent Corridor projects underway or complete between Harrisburg and Memphis, including the Ashby-Marsh Run double track project at the Virginia Inland Port (complete) and the Berryville passing track extension project (to be undertaken FY2010-2011).

The Roanoke Terminal improvements will also complement the track reconfiguration project underway at Riverton Junction (Front Royal). Both projects will greatly improve running time of Crescent Corridor trains operating via the Shenandoah Route.

All Heartland Corridor trains will benefit from the improvements proposed in the Roanoke Terminal.

#### Describe the Public Benefit of Project:

Overall public benefits:

- This project will benefit all Crescent Corridor trains operating through Roanoke. Expected reduction of running time is five minutes or more per train.
- When other steps to reduce running time on the Crescent Corridor are considered, the Roanoke Terminal project will make possible Crescent Corridor premium intermodal service.
- By reducing running time, and by making freight rail more attractive to potential rail users, this project will help to improve air quality, conserve fuel (because of rail's efficiency advantage) and reduce truck traffic
- By increasing capacity, the project enables the rail mode to absorb more growth

#### Type of Project:

The three to four main line tracks between N257 and N258 are connected with multiple crossovers, enabling trains from Harrisburg, Winston Salem and Norfolk to connect with any track in Shaffers Crossing yard and with any route west of mp N258. These crossovers, and the signal system governing them, are antiquated and restrict train speeds to 15 mph. NS will respace and upgrade the crossovers with new turnouts that, when coupled with a modern signal system, will allow 30 mph operating speeds.

Application Scope of Work Covers: Entire project

#### Project Budget Summary (2009 dollars):

Preliminary Service, Engineering, or Feasibility Study	\$ 365,056
Environmental Evaluation	\$ 396,800
Design Engineering	\$ 761,856
Right-of-way Acquisition	· · · · · · · · · · · · · · · · · · ·
Construction	·
Construction Management	
Lease/Acquisition of Equipment	\$ 1,111,040 \$
Other (Relocate fiber optic cable)	\$ 1,206,272
	=======================================
Total Project Budget	\$15,872,000
Construction Construction Management Lease/Acquisition of Equipment	\$ 1,206,272

#### Rail Enhancement Funds Requested in this Application: \$10,717,000 (68%)

This request is for capital costs only. NS will assume all ongoing maintenance and operating cost responsibilities and future capital costs.

No provision has been made for crossing closure or grade separation because there are no grade crossings in the project area.

Note that these estimates are in 2009 dollars. Revised estimates may be necessary when project begins.

Local Match Required by Applicant: \$5,155,000 (32%)
If Overmatch, Provide Percentage: 2%
1) Match Breakdown by Source (include in-kind)
a. Provider of Local Match Norfolk Southern Railway
b. Status (confirmed/anticipated) Confirmed

2) Other Fu	nding Sources Beyond Match Requirement
	a. Provider of Over Match n/a
	b. Status (confirmed/anticipated) n/a
M. Project is the project.	mplementation schedule (based in months). List major milestones of

Survey and Develop Plans: 3 Months Acquire Right of Way: 3 Months Bidding: 2 Months Permitting: 2 Months Relocation of Fiber Optic Line 1 Month Grading: 4 Months Track work: 3 Months Total: 18 Months

# Statement on how this Project promotes or does not preclude Dual/Multi-Access Use:

This project is on Norfolk Southern owned right-of-way on which only Norfolk Southern operates; the rail line will remain an exclusive Norfolk Southern route. There is no proposal to change current operations and allow dual access by another railroad on this track. (The competing north-south route of CSX Transportation, Inc. extends between Alexandria, VA and Rocky Mount, NC [via Richmond, VA].)

Also, Project anticipates intermodal freight growth and will enable service enhancements that will attract domestic truck traffic from many trucking companies. In this sense, Project promotes multi-access (i.e., by trucking companies) use.

List additional users of rail line, facility, and/or equipment: trucking companies using intermodal service offered by Norfolk Southern.

# Identify any possible Environmental or other issues/concerns within the scope of this project.

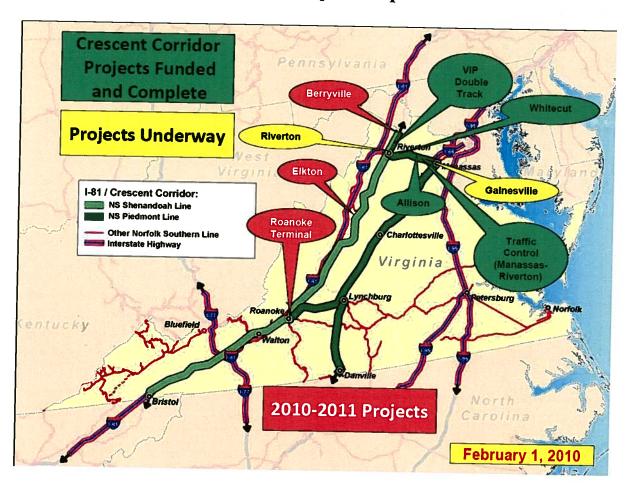
Overall environmental effects are expected to be beneficial as rail freight is considerably more fuel efficient and less polluting than truck freight.

NS owns all property in project area, and there are no known environmental issues or concerns at this time.

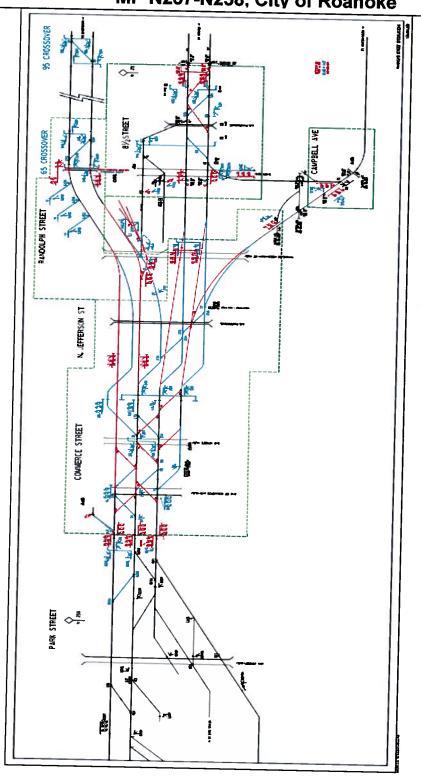
#### Added Capacity to Rail Corridor (Additional Railcars or Passengers)

When viewed in isolation, the Roanoke Terminal project will reduce running time for each train approximately five minutes. When combined with the Riverton Junction reconfiguration project, the aggregate running time reduction for each train between Harrisburg and Roanoke is about ten minutes. Improving running time allows faster turn times for assets such as locomotives, crews and freight cars. When combined with other planned or proposed projects, the synergies will enable additional train starts and increased throughput on this north-south corridor.

#### **Project Map**



# Roanoke Terminal Track and Signal Improvements MP N257-N258, City of Roanoke



# Location of Roanoke Terminal Improvements between mp N257-N258

